

TO-92 Plastic-Encapsulate Transistors

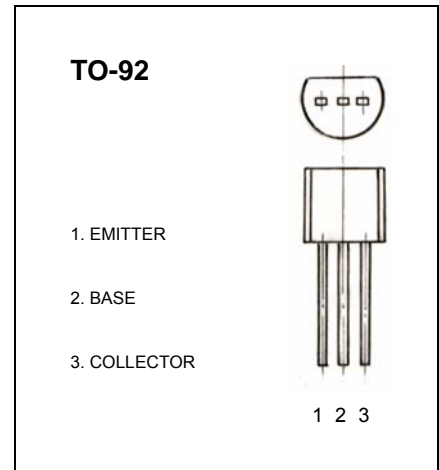
A44 TRANSISTOR (NPN)

FEATURES

- High voltage

MAXIMUM RATINGS ($T_A=25^\circ\text{C}$ unless otherwise noted)

Symbol	Parameter	Value	Units
V_{CB0}	Collector-Base Voltage	400	V
V_{CE0}	Collector-Emitter Voltage	400	V
V_{EB0}	Emitter-Base Voltage	5	V
I_C	Collector Current -Continuous	0.2	A
P_C	Collector Power Dissipation	0.625	W
T_j	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature	-55 to +150	$^\circ\text{C}$



ELECTRICAL CHARACTERISTICS ($T_{amb}=25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C = 100\mu\text{A}$, $I_E = 0$	400			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = 1\text{mA}$, $I_B = 0$	400			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E = 100\mu\text{A}$, $I_C = 0$	5			V
Collector cut-off current	I_{CBO}	$V_{CB} = 400\text{V}$, $I_E = 0$			0.1	μA
Collector cut-off current	I_{CEO}	$V_{CE} = 400\text{V}$			5	μA
Emitter cut-off current	I_{EBO}	$V_{EB} = 4\text{V}$, $I_C = 0$			0.1	μA
DC current gain	$h_{FE(1)}$	$V_{CE} = 10\text{V}$, $I_C = 10\text{mA}$	80		300	
	$h_{FE(2)}$	$V_{CE} = 10\text{V}$, $I_C = 1\text{mA}$	70			
	$h_{FE(3)}$	$V_{CE} = 10\text{V}$, $I_C = 100\text{mA}$	40			
	$h_{FE(4)}$	$V_{CE} = 10\text{V}$, $I_C = 50\text{mA}$	80			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 10\text{mA}$, $I_B = 1\text{mA}$			0.2	V
	$V_{CE(sat)}$	$I_C = 50\text{mA}$, $I_B = 5\text{mA}$			0.3	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C = 10\text{mA}$, $I_B = 1\text{mA}$			0.75	V
Transition frequency	f_T	$V_{CE} = 20\text{V}$, $I_C = 10\text{mA}$ $f = 30\text{MHz}$	50			MHz

CLASSIFICATION OF $h_{FE(1)}$

Rank	A	B1	B2	C
Range	80-100	100-150	150-200	200-300

